



**Syddansk Universitet**

## **Real and virtual places: Affordances, exhibition space, and the meaning of place**

May, Michael ; Achiam, Marianne

*Publication date:*  
2014

*Document version*  
Peer reviewed version

### *Citation for pulished version (APA):*

May, M., & Achiam, M. (2014). Real and virtual places: Affordances, exhibition space, and the meaning of place. Paper presented at 4th International Conference on Designs for Learning, Stockholm, Sweden.

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

## Real and Virtual Places – Affordances, Exhibition space, and the Meaning of Place

Michael May & Marianne Achiam, Department of Science Education, University of Copenhagen, Denmark

**Keywords:** Place, Semiotics, Affordance, Augmented reality, Emotional space

*Presentation category 2: Research studies in progress*

In the following the concept of *place* will be analysed in the context of exhibits and exhibition spaces, and in particular in relation to digital media and the issue of “real” versus “virtual” places. It is part of an effort to establish a framework for *artefact-mediated learning* in educational as well as museum contexts. In recent studies of museum and exhibition design there is an increasing interest in design theory based in *cognitive sciences* and *semiotics* (e.g. Kristiansen 2012; MacLeod, Hanks & Hale 2012; Monti & Keene 2013), but concepts are often used unanalysed, cf. the affordance concept (Allen and Gutwill 2004), or even implicitly, as when the affordance concept is hidden behind the notion of “usability” (Monti & Keene 2013). Our overall research questions are how objects, exhibits and exhibitions acquire meaning (cf. MacLeod, Hanks & Hale 2012; Diamantopoulou, Insulander & Lindstrand 2012) and *how artefacts can mediate learning*, but here specifically with regard to *how affordances of artefacts and exhibition space* (Achiam, May & Marandino, 2014) *are linked to meaningful places, and how we should understand the difference between real and virtual place*. We attempt to develop a concept of place, not as a metaphor (cf. Vors 2012), but as directly implicated in meaning making.

In the museum context artefacts are almost inevitably on display *out-of-place* (e.g. animals removed from their natural habitat, cultural artefacts removed from their context-of-use), even though the diorama can be seen as a re-contextualization of artefacts within a natural scenario (with limited realism). In a thoughtful paper (Leinhardt & Crowley 2002) ask: “why should people bother to visit museums when virtual copies of most objects in museums are so readily available?” Their answer is that cultural artefacts as well as natural objects offer a unique learning experience (in contrast to remediated representations) as a result of four features: (1) the “resolution and density of information” provided by physical objects, (2) the actual scale of real objects, (3) the authenticity of objects from natural or cultural history, and (4) their cultural value and uniqueness. One of their key examples is a burned out Greyhound bus in an exhibition about the civil rights struggles in US. Surprisingly they admit that this is *not* the real bus, although it refers to a particular incident in Birmingham, Alabama. This is a paradox with regard to their claim about *the importance of authenticity and uniqueness* of the museum object as opposed to a *remediation* of the event (a photograph or film clip could record the real bus). We do not, however, doubt that the replica of the burned out bus in fact works as intended, so the question is *why* it works without being “the real object”?

There is a certain mystery about *the experience of place* and our attachment to places. At first it might seem straightforward: “place is not space”. We know this already from geography, architectural theory, and sociology. Whereas the real physical space we live in is an *affordance space* supporting and constraining our actions, this functional space cannot account fully for our relation to objects and events. Contrary to classical affordance theory (Gibson 1986), affordances cannot be directly perceived (May 2010). Although it might appear that we directly perceive affordances without any interpretation (e.g. that a staircase affords climbing), what our perceptual systems can in fact perceive are surface textures, geometric shapes, relative size of objects etc., whereas the *possible actions* made available by objects and events have to be *inferred*, i.e. they require a *representational space* in order to be apprehended.

Intentions similarly refer to actions *in the future*, and they require a representational space for possible actions to be thought (in imagination or in language). A *place* cannot be reduced to a *location* in space, since it is really defined functionally and symbolically by the actions that can take place there. In an apartment space, for example, we clearly distinguish different places by their *functional affordances* and their *symbolic meaning* (e.g. a kitchen as a place for cooking and eating). A place can, however, be *distributed* over locations without losing its function and meaning as a single place: the place of a particular exhibition within a museum might span several rooms or floors. Spaces, on the other hand, can be *decomposed* into parts independent of their meaning and function, cf. the behavioural “space syntax” of visitor trajectories in exhibitions (Wineman & Peponis 2010; Monti & Keene 2013). The real mystery of place, however, is not in the separation of (real) physical space and (symbolic) representational space, but in *the role of fantasies and emotions in supporting our subjective relations to places*. We could consider this to be an *emotional space* superimposed or projected on the real space and its functional-symbolic places.

With regard to the difference between real and virtual places this emotional space has a surprising consequence: since real and virtual places are supported equally well by our fantasies and emotional *relation* to objects and events, the apparently sharp distinction between real and virtual places breaks down. This is why the replica bus of the freedom rides of Alabama works perfectly well as an *authentic object* and why a multimedia immersive recreation of a street in Manila at the Tropenmuseum in Amsterdam (fig.1 left) can create a *genuine sense of place*: the situation will drag us into an emotional space - and the unique place of the historic event in the case of the Alabama bus. In the Manila exhibit the visitor can sit in the jeep and have an *embodied experience of place*, e.g. an experience of driving down a Manila street mediated by the different artefacts and multimedia of the exhibition space. The concept of *embodied experience* plays an import role in modern analyses of meaning making in museums – including the foundation of the concept in phenomenology and cognitive science (MacLeod, Hanks & Hale 2012).



Fig.

Fig. 1. Left: A virtual place in Manila: a street recreated through artefacts, photographs, video and ambient sound (Tropenmuseum, Amsterdam). Right: Digitally augmented art in the “We AR in MOMA” virtual and invasive installation in the Museum of Modern Art, New York, October 2010, <http://www.sndrv.nl/moma/>

The *augmented reality* superimposed on a MOMA exhibition (the “We AR in MOMA” virtual exhibition, Fig. 1 right) or on the former Jewish bookshop in Berlin (in “The Writing on the Wall” installation, Fig. 3 left) might create new forms of interaction and “story-worlds” (Wood 2007), *but* the digital media does not create a completely new form of “mixed reality” as one may think (cf. Sandvik 2002): the historic places of Berlin, for example, are *already* “mixed reality” places, since they are *real, symbolic and imagined realities*

*all-in-one*. The Writing on the Wall installation and its photographic documentation (Attie 1994) link the historical past of 1930 with the present (of 1990) through the projection of historical photographs from pre-war Berlin on the actual (or close-by) buildings that remain in the city, but although this is an innovative form of installation art, the important point is not that this creates a new virtual or “mixed reality”, but that it supports our collective memory. It is emotionally moving because it externalises something that we already know but did not see in all its specificity: *this* was a “Hebraische Buchhandlung”, *this* was a man looking through its window. The effect is again one of (displaced) authenticity, as in the case of the burnt-out-bus.

Artefact-mediated sense of place does of cause not always work as intended. An example might be the experiment of co-articulating art and scientific visualization in Thorbjørn Lausten’s work “The Present - The Polar Space” (Nuet – Det Arkitiske Rum, 1996). In this exhibition live scientific data (e.g. weather data, movement of polar bears) was transformed into abstract diagrammatic representations that might function well as concept art, but because any iconic image-like recognition (May & Stjernfeldt 2008) of the arctic weather and environment was lost in the process, the exhibition did not create any sense of place or mediated presence in the Arctic as intended by the artist. Being told that the images were being updated live based on data transmitted from Greenland did not make any difference for most visitors.

Furthermore any segment of space is not a place as demonstrated by the (normative) concept of *non-places* in anthropology and cultural theory (Auge 1995). A non-place is devoid of meaning and emotion because it supports no particular relations or human identity. In our context here we would stress the lack of affordances provided by non-places other than going somewhere else (Fig. 2).

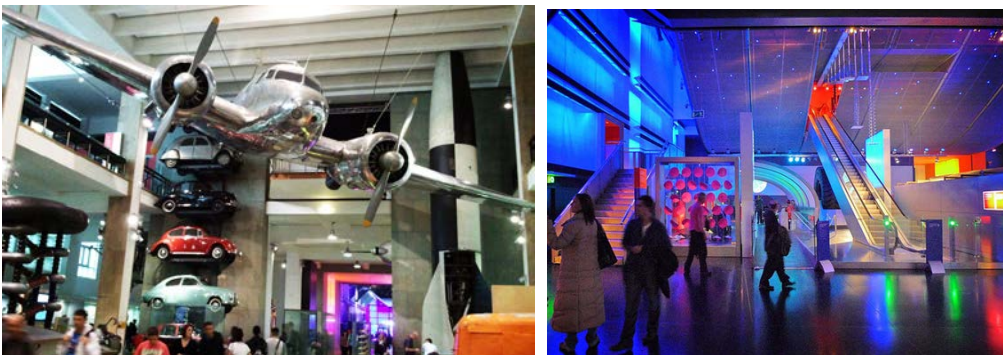


Fig. 2. High-way like non-places in the Science Museum of London, where visitors are not invited to do anything: they therefore mainly move along to local exhibitions within the museum space. Moving down the transportation theme hallway (left) visitors end up in large (secondary) reception area.

Although affordances of objects and events are real and objectively present, they always appear to us within our phenomenal life-world and within changing situations, and the embodied meaning of our *relation* to these objects and events will therefore vary. This was also the origin of the concept of *affordance* in Gestalt psychology (Lewin 1917): the same object (e.g. a house in the countryside) can change its value and meaning completely, if the situation of the observer changes (e.g. from peacetime to wartime). As a soldier in World War 1 the young Kurt Lewin realized how different the “landscape of war” was from the familiar landscape in peacetime. A soldier, a farmer and a wayfarer passing through a landscape might have completely different relations to objects in the same landscape. A house might be a home for the farmer, an aesthetic object for the wayfarer, and a danger zone for the soldier. Even though

there will be a partial overlap in the different experiences, the place as constructed in imagination will be different. The conclusion of Lewin is quite clear: what we call “seeing a hill” or “seeing a house” is not simply a sensory appropriation (“Wahrnehmen”) of something in the world, but an *imagination* (“Vorstellen”) of these objects based on our specific *relation* to them in the given situation. This was a point of departure for his *Topological Psychology* (1936) – a theoretical foundation of social psychology that comes close to what would today be considered a “cognitive semantics” (Talmy 2000), i.e. the cognitive foundation of meaning in grammatical and embodied schematic structures.



Fig. 3. Left: Shimon Attie, “The Writing on the Wall” installation in Berlin 1990, here a Jewish bookstore of 1930 projected on its place in Almstadtstrasse 43. Right: Keith Tyson, “Large Field Array” exhibition of a multitude of individual exhibits aligned in a grid structure.

Art installations like the “Large Field Array” of Keith Tyson (Holm, Kold & Rank 2006), where visitors create their own meaning by moving around among different artefacts and *exploring their potentially meaningful relations*, recreate this fundamental “mixed reality” of place. The point is again that the installation reminds us of something we already know: it externalizes our associative and explorative thinking in the act of moving around different objects (Fig. 3 right). They have no inherent meaning other than lexical meaning, but because they are imposed on us in this orderly way, we interactively explore possible metaphorical relations, visual analogies and narratives between them. As a whole the installation becomes an externalized metaphor for how mind and language *recreates the world as a place endowed with meaning*.

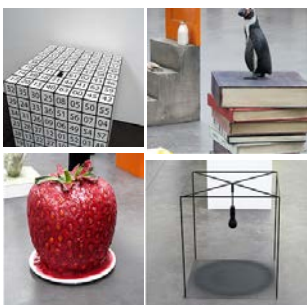


Fig. 4. Isolated artefacts from the “Large field array” of Keith Tyson: like words in a language, the fragments have no meaning beyond the lexical meaning until you actively create relations between juxtaposed objects.

This phenomenological conception of *place* was a point of departure for the philosophy of Martin Heidegger (Malpas 2012). The way human beings exist is by “being there” (Dasein) in a *place* within a world we are co-constructing, building: “Dwelling in this sense does not mean simply to dwell in (and build) a house, but to dwell in and build a whole world to which we are attached. Dwelling describes the way we exist in the world – the way we make the world meaningful, or place-like.” (Cresswell 2009).



## References

- Allen, S. and J.P. Gutwill. 2004. Designing with multiple interactives: Five common pitfalls. *Curator* 47(2), 199-212.
- Attie, S. (1994): *The Writing on the Wall. Projections in Berlin's Jewish Quarter*. Edidtion Braus.
- Augé, M. (1995): *Non-Places: Introduction to an Anthropology of Supermodernity*. Verso.
- Achiam, M., May, M. & Marandino, M. (2014, submitted): Affordances and distributed cognition in museum exhibitions. Submitted to *Museum Management and Curatorship*.
- Cresswell, T. (2009): Place, in: Kitchin, R. & Thrift, N. (Eds): *International Encyclopedia of Human Geography*, Elsevier.
- Diamantopoulou, S., Insulander, E., Lindstrand, F. (2012): Making meaning in museum exhibitions: design, agency and (re-)presentation. *Designs for Learning*, Vol. 5 (1–2), 11-29.
- Fors, V. (2012): The empty meeting-place – Museum metaphors and their implication for learning. *Designs for Learning*, Vol. 5 (1–2), 130-145.
- Gibson, J.J. (1979/1986): *The ecological approach to visual perception*. Lawrence Earlbaum Associates.
- Holm, M.J., Kold, A., & Rank, J. (Eds)(2006): *Keith Tyson: Large Field Array*. Louisiana Museum of Modern Art.
- Kristiansen, E. (Ed)(2012): *The Transformative Museum . Proceedings of the DREAM conference*. Roskilde University.
- Leinhardt, G. & Crowley, K. (2002): Objects of Learning, Objects of Talk: Changing Minds in Museums, in: S. G. Paris (Ed.) *Multiple Perspectives on Children's Object-Centered Learning*. LEA.
- Lewin, K. (1917/1983): Kriegslandschaft [War landscape]. *Zeitschrift für angewandte Psychologie* 12, 440-47. Reprint: *Gestalt Theory*, 2009, Vol. 31, No. 3-4, 253-262.
- Lewin, K. (1936) *Principles of topological psychology*. New York: McGraw-Hill.
- MacLeod, S., Hanks, L.H. & Hale, J. (Eds)(2012): *Museum Making. Narratives, Architectures, Exhibitions*. Routledge.
- Malpas, J. (2012): *Heidegger and the Thinking of Place. Explorations in the Topology of Being*. MIT Press.
- May, M. & Stjernfeldt, F. (2008). Measurement, Diagram, Art.: Reflections on the Role of the Icon in Science and Aesthetics. In: M. Søndergaard, & P. Weibel (Eds.): *Magnet: Thorbjørn Lausten - Visual Systems*, 53-73. Kehrler Verlag.
- May, M. (2010). Beyond affordances - why direct perception is not enough. *CEPHAD 2010 conference: The borderland between philosophy and design research*. Centre for Philosophy and Design.
- Monti, F. & Keene, S. (2013): *Museums and Silent Objects: Designing Effective Exhibitions*. Ashgate Publ.
- Sandvik, K. (2012): Mixed reality, ubiquitous computing and augmented spaces as format for communicating culture, in: (Kristiansen 2012).
- Talmy, L (2000): *Towards a Cognitive Semantics*. MIT Press.
- Wineman, J.D. & J. Peponis (2010): Constructing spatial meaning. Spatial affordances in museum design. *Environment and Behavior*, Vol. 42(1), 86-109.
- Wood, A. (2007): *Digital Encounters*. Routledge.